MYCOTAXON

Volume 107, pp. 197–199 *January–March 2009*

A new species, *Thalloloma microsporum* (*Graphidaceae, Ostropales, Ascomycota*)

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Abstract — A new corticolous species of *Thalloloma* from the Qinling Mountains in Shaanxi Province of China is described. The fungus is characterized by the small ascospores and cinnabarine lips.

Key words — lichen, morphology, taxonomy

Introduction

During a study of the lichen family *Graphidaceae* (*Ostropales*, *Ascomycota*) from Shaanxi Province, China, a corticolous species of *Thalloloma* was found in dry deciduous forests of the Qinling Mountains. It is new to science and described as *Thalloloma microsporum*. The genus as delimited by Staiger (2002) has not been reported from China before.

Material and methods

A dissecting microscope (TECH XTS-20) and a light microscope (OLYMPUS CHB-213) were used for the morphological and anatomical studies. Measurements and illustrations were taken from the manual cross-sections of fruitbodies in tap water. The lichen substance was detected and identified by thin-layer chromatography (TLC) (Culberson & Kristensson 1970, Culberson 1972).

Taxonomy

Thalloloma microsporum Z.F. Jia & J.C. Wei, **sp. nov.** Figure 1

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Species nova similis T. hypolepto, *a quo labellis fere cinnabarinis et ascosporis minoribus.*

Holotype: CHINA. Shaanxi Province, Qinling mountains, Banqiaogou, 33°88′N, 108°01′E, alt. 1520 m, on cortices of cortice *Zelkova serrata* (Thunb.) Makino. 29-

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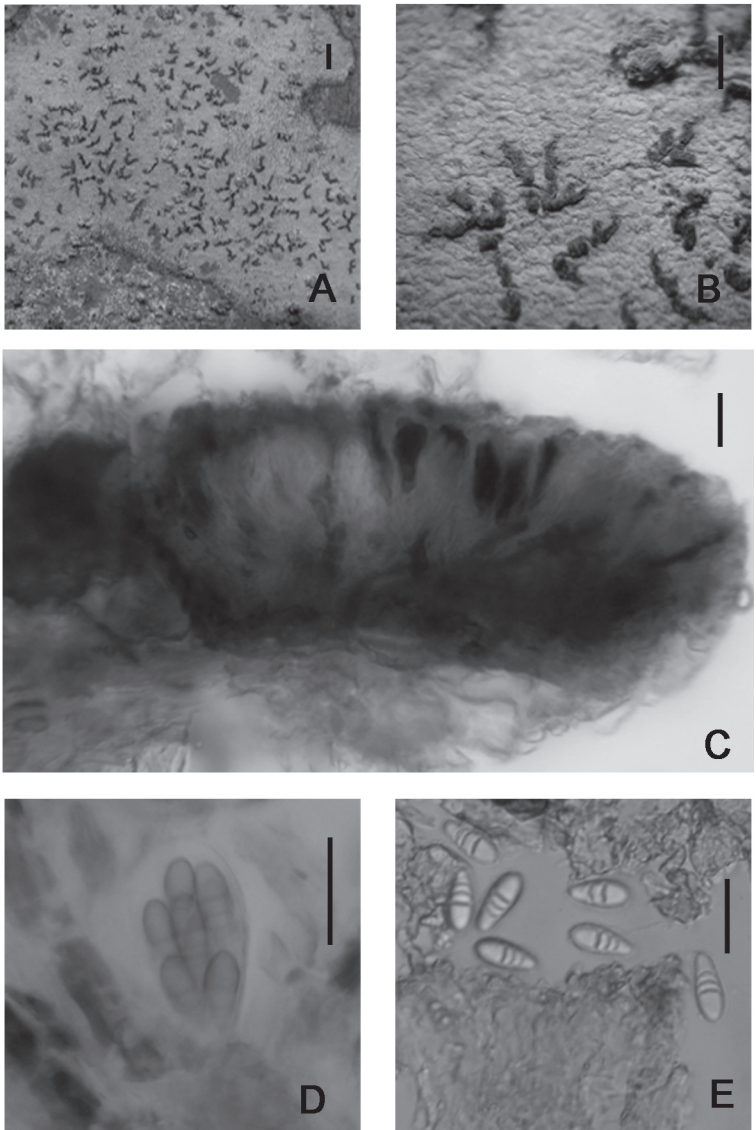

Fig. 1 *Thalloloma microsporum*. A, B. Thallus with apothecia; C. Apothecium cross section; D. An ascus containing ascospores; E. Ascospores.
Bars: A = 2 mm; B = 1 mm; C, D & E = 20 μm.

VII-2005, Ze-feng Jia SQ380 (holotype in LHS; isotype in HMAS-L.); paratypes: ibid., on cortices of *Pinus armandii* Franch. 29-VII-2005, Jia Ze-feng SQ374, SQ375 (LHS, HMAS-L).

Etymology: The specific epithet "*microsporum*" refers to the small ascospores; *micro* is from Greek, small; *spora* in Greek, a seed.

Description: Thallus corticolous, pale white to grayish-white, thin, 0.1–0.2 mm thick, with a dull surface. Apothecia elongate, rarely branched, apparently brown, conspicuous, sub-immersed to sessile, curved and sinuous, often with opening cinnabarine lips because of the reddish brown pigment isohypocrellin (Fig. 1A,B), 0.5–1.5 mm long, 0.1–0.25 mm wide, not grooved, without a distinguishable margin, surface of discs slightly granulous, grayish; proper exciple inconspicuous, not carbonized; epithecium 13–22 µm thick, brownish; hypothecium red-brown, 15–30 µm tall; hymenium slightly brown, clear, 66–80 µm tall, I+ slightly blue; paraphyses with gelatinized wall, up to 1.5 µm wide, septate, enlarged at apices; asci club-shaped, 33–42 × 13–20 µm, 8-spored; ascospores ellipsoid with one end narrower and slightly pointed, 3-septate, hyaline, 15.5–20 × 5.5–8.0 µm, I+ blue, the largest upper cells 5.5–6.5 × 5.0–6.0 µm, the lower end cells 3.5–4.0 × 2.5–3.5 µm, the two middle rectangular cells 4.5–5.5 × 1.5–3 µm (Fig. 1E).

Chemistry: C–, K–, P–; contains isohypocrellin (reddish brown pigment).

The new species is characterized by the opening with reddish lirellae, due to the presence of isohypocrellin, and small, 3-septate, hyaline ascospores. It is similar to *Thalloloma hypoleptum* (Nyl.) Staiger, but differs in the red brown to nearly cinnabarine lips and smaller ascospores (15.5–20 × 5.5–8.0 µm vs. 20–30 × 6.0–8.0 µm) (Staiger 2002). It also resembles *T. cinnabarinum* (Fée) Staiger and *T. rhodastrum* (Redinger) Staiger in containing isohypocrellin (Staiger 2002) but differs by having 3-septate ascospores.

Acknowledgments

The authors are deeply grateful to Dr. Alan W. Archer and Prof. W.Y. Zhuang for serving as pre-submission reviewers and their valuable comments. This project was supported by the National Natural Science Foundation of China (No. 39899400).

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